ABSTRACT OF THE DISCLOSURE

An improvement in a single-shot laser rangefinder having a photo-detector for detecting return laser pulse signals, a signal amplifier for amplifying the return laser pulse signals, and a range processor for determining the range of a reflecting object from the round trip time of flight of the return laser pulse signals. The difference in time at which the strongest laser pulse signal crosses the threshold for detection and the weakest laser pulse signal crosses the threshold for detection causes a timing error in the measured range. The improvement includes a plurality of comparators whose inputs are connected to the signal amplifier, each comparator outputting a digital level signal in response to an analog input signal that is more than the threshold set therein at the negative input terminal of the comparator; a plurality of latches, each latch connected to a respective comparator, the comparator outputs being fetched to the clock inputs of the latches so that when the digital level signal presents itself at the clock input, the latch then latches to the digital level signal; and a microcontroller having a plurality of inputs, each input connected to a respective latch for reading the outputs from the latches, the microcontroller having a store containing a plurality of pre-set correction factors corresponding to the range errors for various pulse amplitudes, the microcontroller having an output connected to the range processor for outputting the compensated range to the range processor upon decoding the output signals of the latches.